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 NEWS  1          Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2  Apr 08  "Ask CAS" for self-help around the clock
 NEWS  3  Apr 09  BEILSTEIN: Reload and Implementation of a New Subject Area
 NEWS  4  Apr 09  ZDB will be removed from STN
 NEWS  5  Apr 19  US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
 NEWS  6  Apr 22  Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
 NEWS  7  Apr 22  BIOSIS Gene Names now available in TOXCENTER
 NEWS  8  Apr 22  Federal Research in Progress (FEDRIP) now available
 NEWS  9  Jun 03  New e-mail delivery for search results now available
 NEWS 10  Jun 10  MEDLINE Reload
 NEWS 11  Jun 10  PCTFULL has been reloaded
 NEWS 12  Jul 02  FOREGE no longer contains STANDARDS file segment
 NEWS 13  Jul 22  USAN to be reloaded July 28, 2002;
                  saved answer sets no longer valid
 NEWS 14  Jul 29  Enhanced polymer searching in REGISTRY
 NEWS 15  Jul 30  NETFIRST to be removed from STN
 NEWS 16  Aug 08  CANCERLIT reload
 NEWS 17  Aug 08  PHARMAMarketLetter(PHARMAML) - new on STN
 NEWS 18  Aug 08  NTIS has been reloaded and enhanced
 NEWS 19  Aug 19  Aquatic Toxicity Information Retrieval (AQUIRE)
                  now available on STN
 NEWS 20  Aug 19  IFIPAT, IFICDB, and IFIUDB have been reloaded
 NEWS 21  Aug 19  The MEDLINE file segment of TOXCENTER has been reloaded
 NEWS 22  Aug 26  Sequence searching in REGISTRY enhanced
 NEWS 23  Sep 03  JAPIO has been reloaded and enhanced
 NEWS 24  Sep 16  Experimental properties added to the REGISTRY file
 NEWS 25  Sep 16  CA Section Thesaurus available in CAPLUS and CA
 NEWS 26  Oct 01  CASREACT Enriched with Reactions from 1907 to 1985
 NEWS 27  Oct 21  EVENTLINE has been reloaded
 NEWS 28  Oct 24  BEILSTEIN adds new search fields
 NEWS 29  Oct 24  Nutraceuticals International (NUTRACEUT) now available on STN
 NEWS 30  Oct 25  MEDLINE SDI run of October 8, 2002
 NEWS 31  Nov 18  DKILIT has been renamed APOLLIT
 NEWS 32  Nov 25  More calculated properties added to REGISTRY
 NEWS 33  Dec 02  TIBKAT will be removed from STN
 NEWS 34  Dec 04  CSA files on STN
 NEWS 35  Dec 17  PCTFULL now covers WP/PCT Applications from 1978 to date
 NEWS 36  Dec 17  TOXCENTER enhanced with additional content
 NEWS 37  Dec 17  Adis Clinical Trials Insight now available on STN
 NEWS 38  Dec 30  ISMEC no longer available
 NEWS 39  Jan 21  NUTRACEUT offering one free connect hour in February 2003
 NEWS 40  Jan 21  PHARMAML offering one free connect hour in February 2003
 NEWS 41  Jan 29  Simultaneous left and right truncation added to COMPENDEX,
                  ENERGY, INSPEC
 NEWS 42  Feb 13  CANCERLIT is no longer being updated
 NEWS 43  Feb 24  METADEX enhancements
 NEWS 44  Feb 24  PCTGEN now available on STN
 NEWS 45  Feb 24  TEMA now available on STN
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 NEWS 46  Feb 26  NTIS now allows simultaneous left and right truncation
 NEWS 47  Feb 26  PCTFULL now contains images
 NEWS 48  Mar 04  SDI PACKAGE for monthly delivery of multifile SDI results
 NEWS 49  Mar 19  APOLLIT offering free connect time in April 2003
 NEWS 50  Mar 20  EVENTLINE will be removed from STN
 NEWS 51  Mar 24  PATDPAFULL now available on STN
 NEWS 52  Mar 24  Additional information for trade-named substances without
                  structures available in REGISTRY
 NEWS 53  Mar 24  Indexing from 1957 to 1966 added to records in CA/CAPLUS

 NEWS EXPRESS  January 6 CURRENT WINDOWS VERSION IS V6.01a,
               CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS INTER    General Internet Information
 NEWS LOGIN    Welcome Banner and News Items
 NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
 NEWS WWW      CAS World Wide Web Site (general information)

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FILE 'HOME' ENTERED AT 09:12:24 ON 27 MAR 2003

=> file agricola
COST IN U.S. DOLLARS                               SINCE FILE      TOTAL
                                                        ENTRY    SESSION
FULL ESTIMATED COST                                      0.21       0.21

FILE 'AGRICOLA' ENTERED AT 09:12:34 ON 27 MAR 2003


FILE COVERS 1970 TO 19 Feb 2003 (20030219/ED)

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=> logoffy]
LOGOFFY] IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> file agricola caplus biosis
COST IN U.S. DOLLARS                               SINCE FILE      TOTAL
                                                        ENTRY    SESSION
FULL ESTIMATED COST                                      0.29       0.50
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FILE 'AGRICOLA' ENTERED AT 09:12:51 ON 27 MAR 2003

FILE 'CAPLUS' ENTERED AT 09:12:51 ON 27 MAR 2003
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FILE 'BIOSIS' ENTERED AT 09:12:51 ON 27 MAR 2003
COPYRIGHT (C) 2003 BIOLOGICAL ABSTRACTS INC.(R)

=> s bnyvv and transgenic
L1          26 BNYVV AND TRANSGENIC

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2           21 DUP REM L1 (5 DUPLICATES REMOVED)

=> s l2 and (rna1 or rna 1 or replicase or polymerase)
L3           3 L2 AND (RNA1 OR RNA 1 OR REPLICASE OR POLYMERASE)

=> d 1-3 ti

L3   ANSWER 1 OF 3  AGRICOLA
TI   Cloning of the coat protein gene from beet necrotic yellow vein virus and
     its expression in sugar beet hairy roots.

L3   ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2003 ACS
TI   Transgenic plants expressing the TGB1 protein of peanut clump
     virus complement movement of TGB1-defective peanut clump virus but not of
     TGB1-defective beet necrotic yellow vein virus

L3   ANSWER 3 OF 3  CAPLUS  COPYRIGHT 2003 ACS
TI   The spreading of foreign genes from genetically modified plants of Beta
     vulgaris. Monitoring in agro- and coastal ecosystems


=> d 3 ab

L3   ANSWER 3 OF 3  CAPLUS  COPYRIGHT 2003 ACS
AB   It was investigated the survival of B. vulgaris carrying
     transgenic-resistance against the soil-born beet necrotic yellow
     vein virus (BNYVV) in the winter, the gene flow between
     transgenic B. vulgaris and wild beet in coastal ecosystems, and
     the role of BNYVV in coastal ecosystems with mesohaline soil
     conditions.  Field expts. in the winter showed a strong correlation
     between winter cold sum and hibernation rate in non- and
     transgenic genotypes.  In expts. with sugar beet Swiss chard
     hybrids, transgenic plants had lower rates of first yr flowering
     (bolting) than non-transgenic controls.  Regarding gene flow
     between transgenic B. vulgaris and wild beet in coastal
     ecosystems using randomly amplified polymorphic DNA-polymerase
     chain reaction there are indications that gene flow has occurred near seed
     prodn. areas in Italy.  In coastal ecosystems with mesohaline soil
     conditions, BNYVV-infection decreased with increasing salt
     concn. in the soil.


=> d 3 so

L3   ANSWER 3 OF 3  CAPLUS  COPYRIGHT 2003 ACS
SO   Verhandlungen der Gesellschaft fuer Oekologie (1998), 28, 327-336
     CODEN: VGOEDK; ISSN: 0171-1113
```

```
=> d 3 kwic

L3    ANSWER 3 OF 3  CAPLUS  COPYRIGHT 2003 ACS
AB    It was investigated the survival of B. vulgaris carrying
      transgenic-resistance against the soil-born beet necrotic yellow
      vein virus (BNYVV) in the winter, the gene flow between
      transgenic B. vulgaris and wild beet in coastal ecosystems, and
      the role of BNYVV in coastal ecosystems with mesohaline soil
      conditions.  Field expts. in the winter showed a strong correlation
      between winter cold sum and hibernation rate in non- and
      transgenic genotypes.  In expts. with sugar beet Swiss chard
      hybrids, transgenic plants had lower rates of first yr flowering
      (bolting) than non-transgenic controls.  Regarding gene flow
      between transgenic B. vulgaris and wild beet in coastal
      ecosystems using randomly amplified polymorphic DNA-polymerase
      chain reaction there are indications that gene flow has occurred near seed
      prodn. areas in Italy.  In coastal ecosystems with mesohaline soil
      conditions, BNYVV-infection decreased with increasing salt
      concn. in the soil.
ST    transgene flow virus Beta ecosystem; necrotic yellow vein virus
      transgenic Beta
IT    Beet
      Beet necrotic yellow vein virus
      PCR (polymerase chain reaction)
         (monitoring of foreign genes from genetically modified Beta vulgaris in
         ecosystems)


=> d l2 1-10 ti

L2    ANSWER 1 OF 21  CAPLUS  COPYRIGHT 2003 ACS
TI    Rapid screening for dominant negative mutations in the beet necrotic
      yellow vein virus triple gene block proteins P13 and P15 using a viral
      replicon

L2    ANSWER 2 OF 21  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI    Biosafety of hybrids between transgenic virus-resistant sugar
      beet and Swiss chard.

L2    ANSWER 3 OF 21  CAPLUS  COPYRIGHT 2003 ACS
TI    Method of genetic modification of a TGB-3 wild type viral gene sequence
      for conferring viral infection resistance to plants

L2    ANSWER 4 OF 21  CAPLUS  COPYRIGHT 2003 ACS
TI    Beet necrotic yellow vein virus gene for conferring viral resistance in
      plants

L2    ANSWER 5 OF 21  CAPLUS  COPYRIGHT 2003 ACS
TI    Generation of 13K gene sugar beet transformants and evaluation of their
      resistance to BNYVV infection

L2    ANSWER 6 OF 21  CAPLUS  COPYRIGHT 2003 ACS
TI    Transgenic plants expressing the TGB1 protein of peanut clump
      virus complement movement of TGB1-defective peanut clump virus but not of
      TGB1-defective beet necrotic yellow vein virus

L2    ANSWER 7 OF 21  CAPLUS  COPYRIGHT 2003 ACS        DUPLICATE 1
TI    Analysis of gene inheritance and expression in hybrids between
      transgenic sugar beet and wild beets

L2    ANSWER 8 OF 21  CAPLUS  COPYRIGHT 2003 ACS
TI    The spreading of foreign genes from genetically modified plants of Beta
      vulgaris. Monitoring in agro- and coastal ecosystems
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L2   ANSWER 9 OF 21  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI   Saline soil condition decreases rhizomania infection of Beta vulgaris.

L2   ANSWER 10 OF 21  CAPLUS  COPYRIGHT 2003 ACS      DUPLICATE 2
TI   Nucleic acid and protein elimination during the sugar manufacturing
     process of conventional and transgenic sugar beets


=> d l2 2 ab

L2   ANSWER 2 OF 21  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB   One important issue of biosafety research is whether gene flow from
     transgenic crops to nontransgenic relatives causes unwanted
     effects. We carried out field trials with hybrids between
     transgenic sugar beets, and a close cultivated relative, Swiss
     chard. This hybrid also acts as a model for "weed beet" hybrids between
     sugar beet and wild/weed beet (Beta vulgaris ssp. maritima).
     Transgenic beets with beet necrotic yellow vein virus (
     BNYVV) coat protein (cp), phosphinothricin-acetyl-transferase
     (bar), and neomycin-phospho-transferase (nptII) genes were hand-crossed to
     Swiss chard. The resulting F1 plants and controls were grown at two
     different BNYVV infestation levels and three different
     competitive conditions with Chenopodium album. Transgenic
     hybrids had consistently higher biomass than controls under high
     background BNYVV infestation, and consistently lower biomass
     than controls under low background infestation. The transgenic
     hybrids had a significantly lower rate of bolting than controls at all
     sites. Competition with Ch. album always had a strong negative influence
     on the performance of all genotypes. We conclude that ecological
     implications due to the introduction and spread of virus-resistant
     transgenic hybrids will be observed only in those feral Swiss
     chard and wild beet populations where fitness is significantly influenced
     by high infestations of BNYVV.


=> d 4 ab
      3 ANSWERS ARE AVAILABLE.  SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET SIZE
The answer numbers requested are not in the answer set.
ENTER ANSWER NUMBER OR RANGE (1):
ENTER ANSWER NUMBER OR RANGE (1):3

L3   ANSWER 3 OF 3  CAPLUS  COPYRIGHT 2003 ACS
AB   It was investigated the survival of B. vulgaris carrying
     transgenic-resistance against the soil-born beet necrotic yellow
     vein virus (BNYVV) in the winter, the gene flow between
     transgenic B. vulgaris and wild beet in coastal ecosystems, and
     the role of BNYVV in coastal ecosystems with mesohaline soil
     conditions.  Field expts. in the winter showed a strong correlation
     between winter cold sum and hibernation rate in non- and
     transgenic genotypes.  In expts. with sugar beet Swiss chard
     hybrids, transgenic plants had lower rates of first yr flowering
     (bolting) than non-transgenic controls.  Regarding gene flow
     between transgenic B. vulgaris and wild beet in coastal
     ecosystems using randomly amplified polymorphic DNA-polymerase
     chain reaction there are indications that gene flow has occurred near seed
     prodn. areas in Italy.  In coastal ecosystems with mesohaline soil
     conditions, BNYVV-infection decreased with increasing salt
     concn. in the soil.


=> d l2 4 ab

L2   ANSWER 4 OF 21  CAPLUS  COPYRIGHT 2003 ACS
AB   Transgenic plants transformed with beet necrotic yellow vein
```

virus (**BNYVV**) gene, and cells from those plants, are disclosed. DNA derived from **BNYVV** RNA-2, 3' end in particular, is used. Sugar beet or N. benthamiana are preferably transformed. Nicotiana benthamiana was transformed with various fragments of **BNYVV** RNA-2 derived cDNA. Transformation with cDNAs corresponding to the 3' end of **BNYVV** RNA-2, one with substitution of hydrophobic residues for hydrophilic ones, resulted in virus resistance.

=> d l2 4 pi

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L2   ANSWER 4 OF 21  CAPLUS  COPYRIGHT 2003 ACS
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   JP 2000312540      A2   20001114      JP 1999-122628   19990428
```

=> d l2 7 ab

L2 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1

AB Reciprocal gene exchange between cultivated sugar beet and wild beets in seed prodn. areas is probably the reason for the occurrence of weed beets in sugar beet prodn. fields. Therefore, when releasing **transgenic** sugar beet plants into the environment, gene transfer to wild beets (Beta vulgaris ssp. maritima) has to be considered. The transfer of **BNYVV** (beet necrotic yellow vein virus) resistance and herbicide-tolerance genes from two **transgenic** sugar beet lines that were released in field expts. in 1993 and 1994 in Germany to different wild beet accessions was investigated. To evaluate the consequences of outcrossing, manual pollinations of emasculated wild beet plants with homozygous **transgenic** sugar beet plants were performed. In the resulting hybrids the transgenes were stably inherited according to Mendelian law. Gene expression in leaves and roots of the hybrids was in the same range as in the original **transgenic** sugar beet plants. Moreover, it was found that in one of the wild beet accessions, transfer and expression of the **BNYVV** resistance gene did considerably increase the level of virus resistance.

=> d l2 7 so

L2 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1

SO Molecular Ecology (1998), 7(12), 1693-1700
CODEN: MOECEO; ISSN: 0962-1083

=> d l2 10 ab

L2 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2

AB The fate of cellular DNA during the std. purifn. steps of the sugar manufg. process from conventional and **transgenic** sugar beets was detd. Indigenous nucleases of sugar beet cells were active during the 1st extn. step (raw juice prodn.) which was carried out at 70.degree.C. This and the consecutive steps of the manufg. process were validated in terms of DNA degrdn. by competitive PCR of added external DNA. Each step of the process proved to be very efficient in the removal of nucleic acids. Taken together, the purifn. steps have the potential to reduce the amt. of DNA by a factor of >1014, exceeding by far the total amt. of DNA present in sugar beets. Furthermore, the gene products of the transgenes neomycin phosphotransferase and **BNYVV** (rhizomania virus) coat protein CP21 were shown to be removed during the purifn. steps, so that they could not be detected in the resulting white sugar. Thus, sugar obtained from conventional and **transgenic** beets is indistinguishable or substantially equiv. with respect to purity.

=> d l2 11-21 ti

L2 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
TI Nicotiana benthamiana plants expressing beet necrotic yellow vein virus (**BNYVV**) coat protein-specific scFv are partially protected against the establishment of the virus in the early stages of infection and its pathogenic effects in the late stages of infection

L2 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2003 ACS
TI Expression of beet necrotic yellow vein virus coat protein gene in transformed beet plants

L2 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2003 ACS
TI Expression of beet necrotic yellow vein virus coat protein gene in transformed sugarbeet plants

L2 ANSWER 14 OF 21 AGRICOLA
TI Expression of single-chain antibody fragments (scFv) specific for beet necrotic yellow vein virus coat protein or 25 kDa protein in Escherichia coli and Nicotiana benthamiana.

L2 ANSWER 15 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Reduced titer of **BNYVV** in **transgenic** sugar beets expressing the **BNYVV** coat protein.

L2 ANSWER 16 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Competitiveness of **transgenic** sugar beet resistant to beet necrotic yellow vein virus and potential impact on wild beet populations.

L2 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2003 ACS
TI DNA sequence comprising at least two coat protein genes and **transgenic** sugar beet with viral coat protein genes

L2 ANSWER 18 OF 21 AGRICOLA
TI Visualisation of trangene expression at the single protoplast level.

L2 ANSWER 19 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI VISUALISATION OF TRANSGENE EXPRESSION AT THE SINGLE PROTOPLAST LEVEL.

L2 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2003 ACS
TI Genetic transformation of sugar beet and virus-resistant plants

L2 ANSWER 21 OF 21 AGRICOLA DUPLICATE 4
TI Cloning of the coat protein gene from beet necrotic yellow vein virus and its expression in sugar beet hairy roots.

=> d l2 16 ab

L2 ANSWER 16 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB Beets are a crop of particular concern regarding invasiveness questions because they commonly become feral due to unintentional hybridization with annual forms of wild beets. In this study the performance of **transgenic** beets resistant to Beet Necrotic Yellow Vein Virus (**BNYVV**) was compared to the performance of unmodified material from the same breeding line. Both **transgenic** and control genotypes were also compared to a conventionally bred variety carrying a similar phenotypic trait. Field tests were developed in a step by step fashion in order to study seed emergence and competitiveness in early life stages. The tests quantified the potential ecological advantage of virus resistance under virus and non-virus infestation conditions. In experimental field releases in 1993 and 1994 in Germany, a small but

increasingly clear 'additive' ecological advantage of the genetically engineered trait was detected. In both years and all competition treatments, the conventional tolerant variety performed best. An impact of naturalization on natural, nonagricultural habitats may appear in wild beet populations in Italian seed beet production areas. However, a survey of coastal areas of North-Eastern Italy found no virus infestation in 1994, suggesting that an increase in wild beet fitness is unlikely to occur.

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=> d l2 16 so

L2   ANSWER 16 OF 21  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
SO   Molecular Ecology, (1996) Vol. 5, No. 2, pp. 199-205.
     ISSN: 0962-1083.


=> d l2 18 ab

L2   ANSWER 18 OF 21  AGRICOLA
```

AB Protoplasts are currently used to study the expression of genes following transformation. Expression is followed on a population of protoplasts after total protein extraction by conventional western blotting or measure of the enzymatic activity of the **transgenic** protein. We describe here a new method, called protoplast printing, allowing easy detection of the fraction of cells expressing a certain protein within a population of protoplasts. It consists of immobilization of the protoplast proteins on a nitrocellulose filter, so as to retain the outlines of the cell, followed by immunological detection of the protein of interest. The only special requirement is an antibody specific for the protein. We have studied the expression of the **BNYVV** coat protein after electroporation of Chenopodium quinoa protoplasts with viral RNAs, and the expression of the NPT II gene in protoplasts isolated from **transgenic** tobacco plants as well as after direct transfer of plasmid DNA into tobacco protoplasts. In both cases - infection with viral RNAs and transformation with plasmid DNA - expressing and non-expressing cells can be distinguished as early as 12h after transfer of the transgenes.

```
=> d l2 20 ab

L2   ANSWER 20 OF 21  CAPLUS  COPYRIGHT 2003 ACS
```

AB A method for Agrobacterium-mediated transformation of crumbly white callus of Beta vulgaris followed by regeneration of plants is described. **Transgenic** B. vulgaris resistant to infection by beet necrotic yellow vein virus (BNYYV) are prepd. These **transgenic** sugar beets are stably transformed with a nucleic acid fragment coding for at least part of the capsid protein of **BNYVV** or for a deriv. thereof.

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=> dis his

     (FILE 'HOME' ENTERED AT 09:12:24 ON 27 MAR 2003)

     FILE 'AGRICOLA' ENTERED AT 09:12:34 ON 27 MAR 2003

     FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 09:12:51 ON 27 MAR 2003
L1             26 S BNYVV AND TRANSGENIC
L2             21 DUP REM L1 (5 DUPLICATES REMOVED)
L3              3 S L2 AND (RNA1 OR RNA 1 OR REPLICASE OR POLYMERASE)

=> s replicase and plant and transgenic
L4          200 REPLICASE AND PLANT AND TRANSGENIC
```

```
=> s l4 and virus
L5          195 L4 AND VIRUS

=> s l5 and (resist? or tolera?)
L6          150 L5 AND (RESIST? OR TOLERA?)

=> s l6 and viral replicase
L7           40 L6 AND VIRAL REPLICASE

=> dup rem l7
PROCESSING COMPLETED FOR L7
L8            27 DUP REM L7 (13 DUPLICATES REMOVED)

=> d 1-10 ti

L8    ANSWER 1 OF 27   CAPLUS  COPYRIGHT 2003 ACS
TI    Preparation of transgenic plants resistant to viral
      infections using viral replicase subunit deletion
      mutants

L8    ANSWER 2 OF 27   CAPLUS  COPYRIGHT 2003 ACS
TI    Improving plant resistance to viruses by expression of
      viral coat protein and replicase genes

L8    ANSWER 3 OF 27   AGRICOLA                         DUPLICATE 1
TI    Cloning of the papaya ringspot virus (PRSV) replicase
      gene and generation of PRSV-resistant papayas through the
      introduction of the PRSV replicase gene.

L8    ANSWER 4 OF 27   CAPLUS  COPYRIGHT 2003 ACS
TI    Replicase-derived resistance against Pea early
      browning virus in Nicotiana benthamiana is an unstable
      resistance based upon posttranscriptional gene silencing

L8    ANSWER 5 OF 27   AGRICOLA                         DUPLICATE 2
TI    RNAs 1 and 2 of Alfalfa mosaic virus, expressed in
      transgenic plants, start to replicate only after infection of the
      plants with RNA 3.

L8    ANSWER 6 OF 27   CAPLUS  COPYRIGHT 2003 ACS
TI    Truncated lettuce mosaic virus capsid gene and its use in
      creating plants with heterologous virus resistance

L8    ANSWER 7 OF 27   CAPLUS  COPYRIGHT 2003 ACS       DUPLICATE 3
TI    Resistance to wheat streak mosaic virus in
      transgenic wheat expressing the viral replicase
      (NIb) gene

L8    ANSWER 8 OF 27   BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI    Transgenic F1 hybrids harboring a defective viral
      replicase exhibit high resistance to CMV in the field.

L8    ANSWER 9 OF 27   BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI    Resistance to viral infection by transgenic plants
      expressing a truncated viral replicase transgene
      correlates with the stability of the transgene protein.

L8    ANSWER 10 OF 27   BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI    Specificity of resistance to pea seed-borne mosaic potyvirus in
      transgenic peas expressing the viral replicase
      (NIb) gene.
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```
=> d so

L8   ANSWER 1 OF 27  CAPLUS  COPYRIGHT 2003 ACS
SO   PCT Int. Appl., 46 pp.
     CODEN: PIXXD2


=> d pi

L8   ANSWER 1 OF 27  CAPLUS  COPYRIGHT 2003 ACS
     PATENT NO.       KIND  DATE          APPLICATION NO.  DATE
     ---------------  ----  --------      ---------------  --------
PI   WO 2002083886     A2   20021024      WO 2002-EP3419   20020325
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
             TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
             CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG


=> d 4 so

L8   ANSWER 4 OF 27  CAPLUS  COPYRIGHT 2003 ACS
SO   Molecular Plant-Microbe Interactions (2001), 14(2), 196-203
     CODEN: MPMIEL; ISSN: 0894-0282


=> d 7 so

L8   ANSWER 7 OF 27  CAPLUS  COPYRIGHT 2003 ACS        DUPLICATE 3
SO   Molecular Breeding (2000), 6(5), 469-477
     CODEN: MOBRFL; ISSN: 1380-3743


=> d 10 so

L8   ANSWER 10 OF 27  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
SO   Journal of General Virology, (Dec., 1998) Vol. 79, No. 12, pp. 3129-3137.
     ISSN: 0022-1317.


=> d 10 ab

L8   ANSWER 10 OF 27  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB   Transgenic pea lines carrying the replicase (Nib) gene
     of pea seed-borne mosaic potyvirus (PSbMV) were generated and used in
     experiments to determine the effectiveness of induced resistance
     upon heterologous isolates. Three pea lines showed inducible
     resistance in which an initial infection by the homologous isolate
     (PSbMV-DPD1) was followed by a highly resistant state.
     Resistance was observed in plants in either the homozygous or
     hemizygous condition and resulted in no overall yield loss  despite the
     initial infection. Resistance was associated with a loss of both
     viral and transgene RNA, which is indicative of a mechanism based upon
     post-transcriptional gene silencing. There was no correlation between the
     steady-state levels of transgene RNA and ability of the plants to show
     resistance. To test the specificity of the resistance,
     plants were also inoculated with the most distantly related sequenced
     PSbMV isolate, NY. PSbMV-NY varied between experiments in its ability to
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induce **resistance**, suggesting that the sequence identity in the Nib gene is borderline for the specificity required for triggering gene silencing. Upon challenge inoculation of **virus**-free recovered leaves, the specificity of the induced **resistance** varied between the two isolates and indicated that the **virus** and transgene additively determined the **resistant** state. These results suggest that the sequence requirements for triggering gene silencing may differ from those involved in the degradation process.

=> d 9 ab

L8 ANSWER 9 OF 27 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

=> d 9 so

L8 ANSWER 9 OF 27 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
SO Plant Biology (Rockville), (1999) Vol. 1999, pp. 21. print.
Meeting Info.: Annual Meeting of the American Society of Plant Physiologists Baltimore, Maryland, USA July 24-28, 1999 American Society of Plant Physiologists (ASPP)

=> d 4 ab

L8 ANSWER 4 OF 27 CAPLUS COPYRIGHT 2003 ACS
AB **Virus resistance** in Nicotiana benthamiana plants contg. a translatable Pea early browning **virus** (PEBV) 54K sequence from the 201K **replicase** gene has been reported previously. **Resistant** plants contain multiple transgene copies divided between two loci. Anal. of a genetic series contg. the two loci in sep. homozygous or heterozygous condition suggest that only one of the loci is necessary to induce the **resistance**. The **resistance** obsd. in R2 and R3 generations of lines contg. both transgene loci in homozygous condition became less consistent in R4 and R5 generations. This inversely correlated with steady-state transgene transcript levels of the segregating populations. The use of recombinant Potato **virus** X vectors carrying PEBV 54K sequences showed that the **resistance** is based upon posttranscriptional gene silencing, is non-strand specific, and recognizes 3' located sequences within the PEBV 54K sequence.

=> d 11-20 ti

L8 ANSWER 11 OF 27 AGRICOLA DUPLICATE 4
TI **Transgenic resistance** to cucumber mosaic **virus** in tomato: blocking of long-distance movement of the **virus** in lines harboring a defective **viral replicase** gene.

L8 ANSWER 12 OF 27 CAPLUS COPYRIGHT 2003 ACS
TI Viral replicon for controlling **plant** viral infection

L8 ANSWER 13 OF 27 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Application of recombinant DNA technology to **plant** protection: Molecular approaches to engineering **virus resistance** in crop plants.

L8 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2003 ACS
TI Characterization of **resistance** to cymbidium ringspot **virus** in **transgenic** plants expressing a full-length **viral replicase** gene

L8 ANSWER 15 OF 27 AGRICOLA DUPLICATE 5
TI Nicotiana benthamiana plants transformed with the 54-kDa region of the pepper mild mottle tobamovirus **replicase** gene exhibit two types of **resistance** responses against viral infection.

L8 ANSWER 16 OF 27 CAPLUS COPYRIGHT 2003 ACS
TI Solanaceae plants expressing the potato leafroll **virus** **replicase** gene which are **resistant** to infection by PLRV and DNA and method for preparing these **transgenic** plants

L8 ANSWER 17 OF 27 AGRICOLA DUPLICATE 6
TI Immunodetection of the 33K/92K polymerase proteins in cymbidium ringspot **virus**-infected and in **transgenic plant** tissue extracts.

L8 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2003 ACS
TI Induction of viral **resistance** in plants by transformation with a **replicase** gene

L8 ANSWER 19 OF 27 CAPLUS COPYRIGHT 2003 ACS
TI Formation of **virus resistant** plants using genes encoding inactive forms of the viral RNA **replicase**

L8 ANSWER 20 OF 27 CAPLUS COPYRIGHT 2003 ACS
TI Use of a truncated gene in the preparation of plants **resistant** to potato **virus** X.

=> d 21-27 ti

L8 ANSWER 21 OF 27 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Elimination of L-A double-stranded RNA **virus** of Saccharomyces cerevisiae by expression of gag and gag-pol from an L-A cDNA clone.

L8 ANSWER 22 OF 27 CAPLUS COPYRIGHT 2003 ACS
TI **resistance** to cymbidium ringspot tombusvirus infection in **transgenic** Nicotiana benthamiana plants expressing a full-length **viral replicase** gene

L8 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2003 ACS
TI **Virus-resistant transgenic** plants and method for their production

L8 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2003 ACS
TI A defective **replicase** gene induces **resistance** to cucumber mosaic **virus** in **transgenic** tobacco plants

L8 ANSWER 25 OF 27 AGRICOLA DUPLICATE 7
TI Expression of amino-terminal portions of full-length **viral** **replicase** genes in **transgenic** plants confers **resistance** to potato **virus** X infection.

L8 ANSWER 26 OF 27 CAPLUS COPYRIGHT 2003 ACS
TI Advances and prospects in potato virology with special reference to **virus resistance**

L8 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2003 ACS
TI **Virus resistance** in plants transformed with nonstructural sequences from a pathogenic **virus**

=> d 27 ab

L8 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2003 ACS

AB Expression of a sequence encoding a nonstructural 54 kilodalton protein of tobacco mosaic **virus** (TMV) in tobacco plants endows these plants with **resistance** to infection by TMV. The sequence encoding this protein (nucleotides 3405-4916) was cloned as a cDNA from the readthrough portion of the 183K gene using polymerase chain reaction. Plants regenerated from callus transformed with this gene produced a protein that was pptd. by antibodies to this protein, and had 1-5 integrated copies of the gene per genome. Plants transformed with the gene in the correct orientation showed no symptoms 48 days after infection with U1-TMV.

=> d 27 so

L8 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2003 ACS

SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2

=> d 27 pi

L8 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2003 ACS

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9113542	A1	19910919	WO 1991-US1631	19910311
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	CA 2078134	AA	19910913	CA 1991-2078134	19910311
	EP 537163	A1	19930421	EP 1991-908562	19910311
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	JP 05508535	T2	19931202	JP 1991-508295	19910311
	JP 2002204694	A2	20020723	JP 2001-327575	19910311
	US 5596132	A	19970121	US 1995-488672	19950607
	US 5633449	A	19970527	US 1995-479577	19950607
	US 2002104116	A1	20020801	US 1996-708354	19960904
	US 5945581	A	19990831	US 1996-756977	19961126

=> d 24 ab

L8 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2003 ACS

AB Nicotiana tabacum cv. Turkish Samsun NN plants were transformed with a modified and truncated **replicase** gene encoded by RNA-2 of cucumber mosaic **virus** strain Fny. The **replicase** gene had been modified by deleting a 94-base-pair region spanning nucleotides 1857-1950; the deletion also caused a shift in the open reading frame, resulting in a truncated translation product .apprxeq.75% as large as the full-length protein. Upon transformation via Agrobacterium tumefaciens, **transgenic** plants were obtained that were **resistant** to **virus** disease when challenged with either cucumber mosaic **virus** virions or RNA at concns. up to 500 .mu.g/mL or 50 .mu.g/mL, resp., the highest concns. tested. This **resistance** was abs., as neither symptoms nor **virus** could be detected in uninoculated leaves, even after prolonged incubation (120 days after inoculation). Thus, such a "**replicase**-mediated" **resistance** strategy may be applicable to other **plant** and animal viruses.

=> d 24 so

L8 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2003 ACS

SO Proceedings of the National Academy of Sciences of the United States of America (1992), 89(18), 8759-63
CODEN: PNASA6; ISSN: 0027-8424

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=> dis his

     (FILE 'HOME' ENTERED AT 09:12:24 ON 27 MAR 2003)

     FILE 'AGRICOLA' ENTERED AT 09:12:34 ON 27 MAR 2003

     FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 09:12:51 ON 27 MAR 2003
L1             26 S BNYVV AND TRANSGENIC
L2             21 DUP REM L1 (5 DUPLICATES REMOVED)
L3              3 S L2 AND (RNA1 OR RNA 1 OR REPLICASE OR POLYMERASE)
L4            200 S REPLICASE AND PLANT AND TRANSGENIC
L5            195 S L4 AND VIRUS
L6            150 S L5 AND (RESIST? OR TOLERA?)
L7             40 S L6 AND VIRAL REPLICASE
L8             27 DUP REM L7 (13 DUPLICATES REMOVED)

=> s benyvirus and transgenic
L9              0 BENYVIRUS AND TRANSGENIC

=> s benyvirus
L10            14 BENYVIRUS

=> dup rem l10
PROCESSING COMPLETED FOR L10
L11            10 DUP REM L10 (4 DUPLICATES REMOVED)

=> d 1-10 ti

L11  ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2003 ACS
TI   Suppression of plant virus RNA silencing in plant cells using proteins
     from Sindbis-like plant viruses

L11  ANSWER 2 OF 10  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI   First report of Beet soil-borne virus on sugar beet in Iran.

L11  ANSWER 3 OF 10  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI   Effects of two soil-borne viruses of sugarbeet and their fungal vector,
     Polymyxa betae, on virus accumulation and plant growth in sugarbeet.

L11  ANSWER 4 OF 10  AGRICOLA                           DUPLICATE 1
TI   Complete nucleotide sequence and genome organization of Beet soilborne
     mosaic virus, a proposed member of the genus Benyvirus.

L11  ANSWER 5 OF 10  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI   Plant virus transmission by plasmodiophorid fungi is associated with
     distinctive transmembrane regions of virus-encoded proteins.

L11  ANSWER 6 OF 10  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI   Aubian wheat mosaic virus, a new soil-borne wheat virus emerging in
     France.

L11  ANSWER 7 OF 10  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI   Identification of genes involved in the transmission of viruses by
     plasmodiophorid vectors.

L11  ANSWER 8 OF 10  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI   The Beet soilborne pomovirus in Belgium and relationship with Rhizomania.

L11  ANSWER 9 OF 10  AGRICOLA                           DUPLICATE 2
TI   Deletions in the KTER-encoding domain, which is needed for Polymyxa
     transmission, in manually transmitted isolates of Beet necrotic yellow
     vein benyvirus.
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L11  ANSWER 10 OF 10  CAPLUS  COPYRIGHT 2003 ACS
TI   Highly sensitive immunoassays for plant viruses detection


=> d so

L11  ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2003 ACS
SO   PCT Int. Appl., 215 pp.
     CODEN: PIXXD2


=> d pi

L11  ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2003 ACS
     PATENT NO.        KIND  DATE            APPLICATION NO.  DATE
     ---------------   ----  --------        ---------------  --------
PI   WO 2003016490      A2   20030227        WO 2002-US26242  20020816
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD,
             RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
             CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
             NE, SN, TD, TG

=> d 2 ab

L11  ANSWER 2 OF 10  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
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